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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/014,879	12/11/2001	Andrew M. Vincent	MS1-1029US	2366

22801 7590 11/29/2004
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EXAMINER

NGUYEN, PHU K

ART UNIT PAPER NUMBER

2671

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/014,879

Applicant(s)

VINCENT ET AL.

Examiner

Phu K. Nguyen

Art Unit

2671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,7,8,10 and 13 is/are rejected.
- 7) ☒ Claim(s) 3,5,6,9,11 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 7, 8, 10, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by SZENBERG et al. (An Algorithm for the Visualization of a Terrain with Objects).

As per claim 1, Szenberg teaches the claimed “method of determining portions of a surface within a space that are occluded from an observation point” (Szenberg, page 105, column 2, lines 33-42), comprising:

“(a) defining a horizon on the surface with reference to the observation point” (Szenberg, page 106, column 2, lines 29-38; Szenberg calculates the horizons on the surface from the user’s viewpoint); and

“(b) identifying a region within the space that is beneath the horizon” (Szenberg, page 106, column 1, lines 40-45; column 2, lines 39-45; Szenberg identifies the pixels corresponding to the unpaired region on the screen beneath to the horizon).

Claim 2 adds into claim 1 “the step (b) comprises the step of projecting a ray from the observation point that intersects the horizon and defines an area that is occluded from the observation point” (Szenberg, page 106, column 1, lines 40-45; column 2, lines 39-45; Szenberg projects the ray m.sub.(i-1) to define a horizon and identifies the occluded region corresponding to the ray m.sub.i beneath the horizon).

Claim 4 adds into claim 1 "identifying a region within the space that is beyond the horizon" (Szenberg, page 106, column 1, lines 40-45; column 2, lines 39-45; Szenberg projects the ray $m.sub.(i-1)$ to define a horizon and identifies the region beyond the horizon wherein the region is defined by the ray $m.sub.i$, $m.sub.(i+1)$, $m.sub.(i+2)$, ...)).

Claims 7, 8, and 10 claim a system to perform the steps of the method of claims 1, 2, and 4, respectively; accordingly, they are rejected under the same reason.

Claim 13 claims a computer program product comprising computer program logic for enabling a processor in a computer system to perform the method of claim 1; therefore, they are rejected under the same reason.

Claims 3, 5, 6, 9, 11, and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 3, and 9 contain the allowable feature of "disregarding the region identified in step (b) when the depth is less than a predetermined threshold". Szenberg teaches the depth of the region (page 108, column 2, formula (7)), but does not teach the disregarding of the region when the depth is less than a predetermined threshold.

Claims 5 and 11 and their corresponding dependent claims 6, and 12, contain the allowable feature of "step (a) comprises the step of generating a plurality of coordinates, each of the coordinates including an azimuth angle and a horizon elevation angle". Szenberg does not teach the generating of an azimuth angle to define a horizon.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu K. Nguyen whose telephone number is (703)305 - 9796. The examiner can normally be reached on M-F 8:00-4:30.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phu K. Nguyen
November 22, 2004

Phu K. Nguyen
PHU K. NGUYEN
EXAMINER IN CHARGE
ART UNIT 2671